

ABSTRACT OF THE DISCLOSURE

A signal processing device uses a $\Delta\Sigma$ modulator having varying effective orders to ensure an S/N ratio by selecting a high order when a 1-bit music signal is output via the $\Delta\Sigma$ modulator. The signal processing device prevents a noise during switchover by shifting to a low order just before the $\Delta\Sigma$ modulator is bypassed if this occurs. The present invention provides a digital signal processing device which can switch between an original sound signal and a $\Delta\Sigma$ modulation signal, and yield a sufficient S/N ratio for a reprocessed $\Delta\Sigma$ modulation signal. If any 1-bit original sound signal is input, little switching noise is generated.

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